

**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION**

CUTTING EDGE VISION, LLC

Plaintiff,

v.

T-MOBILE US, Inc., and T-MOBILE USA, Inc.

Defendants.

Case No. 6:24-cv-270-AM-DTG

JURY TRIAL DEMANDED

**PLAINTIFF'S RESPONSE TO DEFENDANTS' OPENING CLAIM CONSTRUCTION
BRIEF**

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PLAINTIFF'S LIST OF EXHIBITS

1. **Exhibit A** - Expert Declaration of David W. Hughes Dated March 20, 2025, including Exhibits 1 and 2 (“Hughes Decl.”).
2. **Exhibit B** - Declaration of Justin J. Lesko Dated March 20, 2025.
3. **Exhibit C** - U.S. Patent No. 10,063,761 (“761 Patent”), Plaintiff’s Exhibit 4.
4. **Exhibit D** - U.S. Patent No. 11,153,472 (“472 Patent”), Plaintiff’s Exhibit 4A.
5. **Exhibit E** - Portions of the File History of U.S. Patent No. 10,063,761 (“761 F.H.”).
6. **Exhibit F** - Portions of the File History of U.S. Patent No. 11,153,472 (“472 F.H.”).
7. **Exhibit G** - Portions of the File History of U.S. Patent No. 9,936,116 (“116 F.H.”).
8. **Exhibit H** – Transcript of Deposition Testimony of Dr. Andrew Wolfe, Ph.D., taken on March 14, 2025 (“Wolfe Dep.”).
9. **Exhibit I** - Steven M. Kaplan, *Wiley Electrical And Electronics Engineering Dictionary*, John Wiley & Sons, Hoboken, New Jersey, 2004.
10. **Exhibit J** - Rudolf F. Graf, *Modern Dictionary Of Electronics*, Seventh Edition, Butterworth-Heinemann, Woburn, Massachusetts, 1999.
11. **Exhibit K** - Jane Radatz, *The IEEE Standard Dictionary Of Electrical And Electronics Terms*, Sixth Edition, 1996.

I. INTRODUCTION

This case involves the same two CEV patents and claims addressed in this Court’s February 22, 2023, claim construction order in *Cutting Edge Vision, LLC, v. TCL Technology Group Corporation, et. al.* See T-Mobile Ex. 8.

CEV and Dr. Hughes establish below that the claim terms clearly define their scope by reciting the requisite structure of both the hardware and software for the claimed operations. The claim terms are definite and their plain and ordinary meaning controls.

T-Mobile focuses mostly on the three “controller” terms this Court already construed as “Not 112 ¶6. Plain and ordinary meaning.” See T-Mobile Ex. 8 at 3. To justify reopening the 112 ¶6 discussion, T-Mobile asserts (T-Mobile Brief, p. 8, fn.4) that the Court “did not have the benefit of *XR Communications*” decided after this Court’s CEV/TCL decision. However, *XR Comm.* did not change the *Williamson* standard; it applied it to a different term, “search receiver logic,” finding that a “logic” for a function implicated 112 ¶6. Also, unlike here, the claims in *XR Comm.* failed to disclose sufficient structure for the claimed operations.

This Court correctly found in CEV/TCL that, under *Williamson*, the “controller” terms recite sufficient structure for the claimed operations and are not indefinite. As explained here and in Dr. Hughes’ declaration: (1) the claims specify that a structural controller performs the operations together with cellular interface, touch sensitive display, and non-volatile memory hardware structures, and (2) for the controller’s automatic uploading, each claim recites the structure/framework of an IF-THEN conditional program that uses simple, known data inputs.

T-Mobile also asks the Court to reverse its holding that “the device” in claim 1 of the ’761 Patent is the “camera system. However, T-Mobile submits only attorney argument without evidence. As shown below, nothing has changed, and the Court’s prior ruling is correct.

The Court also addressed in CEV/TCL the fifth term: “cellular network access fees” and “increased cellular network access fees,” where it rejected TCL’s indefiniteness argument and applied “plain and ordinary meaning.” T-Mobile now asks for a special definition: “‘increased’ requires a fee beyond the cellular network access fee.” But, the Court’s ruling was correct: it applied “plain and ordinary meaning” to the entire term, which includes the word “increased.”

As to the sixth term, the parties agree each preamble is limiting.

II. The Williamson Standard Has Not Changed

Step 1: A claim drafter should apprise a person of ordinary skill in the art of the scope of the claim. “Because invoking §112 ¶6 is typically a choice left to the claim drafter, we presume ... that a claim limitation is not drafted in means-plus-function format in the absence of the term ‘means.’” *Dyfan, LLC v. Target Corp.*, 28 F.4th 1360, 1365 (Fed Cir. 2022). The presumption is overcome only if the term “recites ‘function without reciting sufficient structure for performing that function.’” *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1348-49 (Fed. Cir. 2015). “Structure may ... be provided by describing the claim limitation's operation, such as its input, output, or connections.” *Apple Inc. v. Motorola, Inc.*, 757 F.3d 1286, 1298 (Fed. Cir. 2014). “[T]o one of skill in the art, the ‘structure’ of computer software is understood through, for example, an outline of an algorithm, a flowchart, or a specific set of instructions or rules.” *Id.*

Step 2: Only when both (1) a claim term is determined to be means-plus- function and (2) the function of that term requires implementation in a special purpose computer, must the specification disclose an algorithm for performing the claimed function. *Williamson*, 792 F.3d 1339 at 1352. The “algorithm” may be expressed as “a mathematical formula, in prose, or as a flow chart, or in any other manner that provides sufficient structure.” *Id.*

III. This Court ruled correctly that CEV’s “controller” elements are not §112 ¶6 terms.

T-Mobile offers no valid reason to reverse this Court’s prior ruling that “controller” is “Not 112 ¶6. Plain and ordinary meaning.” *See*, T-Mobile Ex. 8 at 3.

T-Mobile argues that (1) CEV’s element (f) in each claim is a means-plus-function term, and (2) the specification lacks the required structure corresponding to the recited “functions.” T-Mobile Brief p. 8. However, T-Mobile fails to meet its burden to prove *both* arguments. Instead, it relies on Dr. Wolfe’s opinions, which Dr. Hughes demonstrates are incorrect and based on an admittedly incomplete review of the record.¹

1. Element (f) is not a means-plus-function term.

CEV made clear in its claim language, in its specification, and during prosecution that the “controller” terms are not means-plus-function. The Court agreed. T-Mobile asks this Court to rewrite the claims despite CEV’s deliberate actions to avoid the §112 ¶6 format.

First, these terms are presumed not to be means-plus-function because they do not recite “means” or similar language, as T-Mobile concedes. “Because invoking §112 ¶6 is typically a choice left to the claim drafter, we presume at the first step of the analysis … that a claim limitation is not drafted in means-plus-function format in the absence of the term ‘means.’” *Dyfan, LLC v. Target Corp.*, 28 F.4th 1360, 1365 (Fed Cir. 2022) (emphasis added).

Second, with its initial submission to the PTO of the *exact claims* now construed in the ’472 Patent, CEV explicitly stated during prosecution that its terms are not means-plus-function

¹Dr. Wolfe opines only on the three “controller” terms but admits he did not review the Court’s prior claim construction proceedings or the evidence and arguments underlying its ruling. Wolfe Dep., pp. 53-56. He reviewed Dr. Hughes’ earlier declaration, was aware of his opinions, and knew the materials Dr. Hughes relied upon. *Id.* at 33-34, 39-44. Yet, he provided no testimony on many topics Dr. Hughes addressed. Where he disagrees, Dr. Wolfe concedes he did not review many of Dr. Hughes’ sources, dismissing them as irrelevant without examining them. *Id.* at 39-44, 150-53.

and asked the Examiner to notify CEV if he disagreed, stating ('472 F.H. at CEV-0017329):²

“In addition, Applicant has taken care to prepare the claims in a manner that does not fall within 35 U.S.C. Section 112, Para. 6. Specifically, Applicant has undertaken to draft the claims in a manner that recites structure, material, or acts in support of the various operations. Applicant requests that the Examiner inform Applicant if he believes that any claim falls within 35 U.S.C. Section 112, Para. 6, so that appropriate amendments can be made.”

Thus, CEV provided clear notice in the intrinsic record that its claims are not means-plus-function. The examiner did not disagree or label “controller” as §112 ¶6, even when issuing (and later withdrawing) a written description rejection in the '472 Patent. '472 F.H. at CEV-0012894-897. Instead, the record shows the examiner considered §112 issues but chose not to designate any claim element as §112 ¶6. “Intrinsic evidence, such as ... the prosecution history, can be informative in determining whether the disputed claim language recites sufficiently definite structure or was intended to invoke §112, ¶6.” *Dyfan, LLC v. Target Corp.*, 28 F.4th 1360, 1365-66 (Fed Cir. 2022).

The above intrinsic record was specifically highlighted in the prior claim construction proceedings, yet T-Mobile and its expert ignore it. They disregard CEV’s express statements and the examiner’s decision to decline §112 ¶6 interpretation. Moreover, Dr. Wolfe knew of CEV’s statements but failed to address them. Wolfe Decl. pp. 15-20, 56-58; Wolfe Dep., pp. 79, 88.

Notwithstanding the prosecution history, T-Mobile argues the presumption against means-plus-function terms is overcome because: (1) the claims allegedly lack structure for the claimed operations because the “controller” is non-structural, (2) the claims supposedly fail to recite “sufficient structure to perform the recited functions.” Both arguments are wrong.

² CEV submitted the same statement with its initial claims submission in the '761 Patent.'761 F.H at CEV-0032924. Hughes Decl. at ¶86.

a. The controller is hardware structure connected to other hardware structures.

T-Mobile asserts that “controller” is “simply a substitute for any generic means for performing the claimed functions.” T-Mobile Brief, p. 6. The Court rejected that argument in CEV/TCL when it construed “controller” as “Not 112 ¶6. Plain and ordinary meaning.” T-Mobile Ex. 8 at 3. The Court was correct. The term “controller” in the claims refers to the controller hardware structure which is connected to other hardware structures explicitly recited in the claim.

“The claim construction inquiry . . . begins and ends in all cases with the actual words of the claim.” *Renishaw PLC v. Marposs Societa' per Azioni*, 158 F.3d 1243, 1248 (Fed. Cir. 1998). Indeed, “in cases where it is clear that a claim term itself connotes some structure to a person of ordinary skill in the art, ‘the presumption that §112, 6 does not apply is determinative’ in the absence of ‘more compelling evidence of the understanding of one of ordinary skill in the art.’” *Dyfan, LLC v. Target Corp.*, 28 F.4th 1360, 1366 (Fed. Cir. 2022) (citation omitted).

T-Mobile’s expert, Dr. Wolfe, ignores both the relevant claim language and Dr. Hughes’s prior analysis. Dr. Wolfe (¶102) summarily concludes that the claims “simply identify a ‘controller configured to . . .’ perform various allegedly novel functions.” This assertion is wrong.

As explained in the CEV/TCL matter, a POSITA would understand the claimed “controller is a specific hardware device that communicates with and controls other hardware devices of the system,” and it is coupled to and operates with the cellular interface, non-volatile memory, and touch sensitive display hardware in the claim. Hughes Decl. at ¶88. Dr. Wolfe offers no rebuttal.

Instead, T-Mobile asserts that *WSOU Invs. LLC v. Google LLC*, No. 2022-1063, 2023 WL 6889033, (Fed. Cir. Oct. 19, 2023) “is especially instructive.” However, T-Mobile misapplies *WSOU* by focusing on the *wrong patent*. *WSOU* involved two patents (the ’045 and ’825 patents), both containing the word “processor.” The ’825 Patent recited “at least one memory and the

computer program code are configured, with the at least one processor, to cause the apparatus to” perform various operations. The Federal Circuit held that the “processor” in the “825 Patent was *not* §112 ¶6 because

“[t]he disputed claim limitation recites multiple elements and their connections to one another” and “the recited combination of these multiple … structures informs the skilled artisan’s relative understanding of what each structure is and what it is not, as well as how the various structures relate to one another.” *WSOU, 2023 WL 6889033, at *11.*

Here, CEV’s claims expressly couple a structural controller with: a structural cellular interface, structural non-volatile memory, and a structural touch sensitive display. Hughes Decl. at ¶88. CEV’s claims also describe how these structures interact to carry out the claimed operations. *Id.*

T-Mobile dismisses key parts of the specification confirming the “controller” is structural. It argues “the controller is a generic box in Fig. 3.” T-Mobile Brief, p. 14. However, Figure 3 confirms that the claimed “controller” is structural by showing it interconnected to other structural components, such as “camera CCD,” “view finder,” “cellular interface,” “AF motor,” “zoom motor,” “storage media R/W,” “LCD display,” “remote light sensor,” “buttons,” “touch pad device,” and “voice recognition unit.” Hughes Decl. at ¶93.

Courts, including this Court, repeatedly hold that placement of a term in a figure “alongside and in the same format as” other structural terms highlights that the patent is using the term “to connote a known structure” rather than as a means. *Cyboenergy, Inc. v. Altenergy Power Sys. United States, Inc.*, No. 6:22-CV-01136-KC, 2023 U.S. Dist. LEXIS 227791 at *13, (W.D. Texas, December 20, 2023) (finding “DC Power Combiner” was structural in part because a figure “shows the output of four DC-DC boost converters … as inputs to the ‘DC Power Combiner’ …, whose output is connected to both the DC power supply … and to DC-AC Inverter.”); *VR Optics, LLC v. Peloton Interactive, Inc.*, 345 F. Supp. 3d 394, 410 (S.D.N.Y. 2018) (finding “[t]he placement

of ‘logic’ alongside and in the same format as these other clearly structural terms [including microphones, speakers, and communication interfaces] highlights that the ... patent is using the term logic to connote a known structure”).

Next, T-Mobile asserts the specification uses the term “controller” generically, citing uses in the specification of “controller” beyond the camera controller. T-Mobile Brief, p. 6. However, arguments about different controllers in the specification are not relevant to the camera system recited in the claims. Hughes Decl. at ¶100. The touchpad, game, and joystick controllers do not perform camera or cellular device operations as claimed. *Id.*; See *Sysmex Corp. v. Beckman Coulter, Inc.*, No. 19-1642-RGA-CJB, 2021 U.S. Dist. LEXIS 66530 at *17-18 (D. Del. Apr. 6, 2021) (“the Court is not persuaded that just because the specification describes another ‘controller’ that has different functions than the claimed ‘controller,’ this means that the claimed ‘controller’ is a ‘black box’ that must [be] means-plus-function.”).

T-Mobile also argues that the specification’s use of “operable” is “the essence of functional claiming.” T-Mobile Brief, p. 6. This is misleading. The ***claim*** elements at issue do not even recite the term “operable.” Hughes Decl. at ¶89. Use of that word in the specification – and not the claims – is irrelevant to the §112 ¶6 issue. Moreover, T-Mobile concedes that CEV’s claims do not use “means” or similar language.

Similarly, T-Mobile’s argument that CEV “represented that element (f) recites ‘upload functions’ and ‘other functions’” (T-Mobile Brief, pp. 5-6) during prosecution is incorrect. Those prosecution history references characterized the ***specification*** and Figure 3, not any claim element. Hughes Decl. at ¶100.

Regarding extrinsic evidence, T-Mobile provides none. It relies instead on Dr. Wolfe’s opinions, who admitted dismissing most of Dr. Hughes’ cited evidence as irrelevant (without

reading it) even though it was presented to the Court in the CEV/TCL. Wolfe Dep., pp. 39-44, 150-53. Dr. Hughes also demonstrates that Dr. Wolfe incorrectly characterized the few items of extrinsic evidence he considered. Hughes Decl. at ¶94. Notably, Dr. Wolfe does ***not*** deny that Dr. Hughes's extrinsic evidence (submitted again herein) reflects the understanding of a POSITA. *Id.*

In sum, the controller is a structure coupled to additional hardware structures (a touch-sensitive display, memory, cellular interface) that performs the claimed operations. Hughes Decl. at ¶¶81-100. Those structures and the structure for a program set forth in the claim (discussed in part b below), are sufficient for performing the recited operations.

b. The claims provide sufficient structure for all operations.

T-Mobile argues that even if this Court confirms its prior finding that the controller is a structure, element (f) in each claim should still be construed as means-plus-function, based on T-Mobile's *incorrect* assertion that the claims do not provide "sufficient structure" for what it characterizes as the "functions" of those elements.³ T-Mobile Brief, pp. 6-10.

First, in the CEV/TCL claim construction, TCL argued: "Regardless of whether 'controller' is construed to be structure ... the presumption is overcome here because the claim term 'recites function without reciting sufficient structure for performing that function'" citing *Williamson*.⁴ The Court disagreed, and ruled "controller" is "Not 112 ¶6." T-Mobile tries to undermine the Court's prior decision by asserting (T-Mobile Brief Fn. 4) that "[t]he Court did not have the benefit of *XR Communications* when it made that ruling."

However, *XR Communications* did not overrule or change the *Williamson* standard. The

³ T-mobile adopts the tactic of repeating (nearly 100 times in its brief alone) the word "function" or "functional," with the hope that it may stick. That refrain is incorrect and unsupported.

⁴ TCL Reply Brief (Dkt. # 46), p. 1. TCL also argued that CEV failed to recite any algorithm for the controller to perform the claimed operations. *Id.* at p. 3.

fact pattern in *XR Communications*, and the other cases that T-Mobile cites about “generic microprocessors,” does not apply. Unlike those cases, CEV does not merely identify the “controller” as a class of structures. Here, not only is the “controller” a structure, but the claim also explicitly sets forth the program structure for that controller necessary to perform the recited operations, as demonstrated below.

While T-Mobile focuses mostly on the specification, at step 1 (whether the presumption against means-plus-function has been overcome), the challenger must “demonstrate[] that the ***claim term*** … recites ‘function without reciting sufficient structure for performing that function.’” *Williamson*, 792 F.3d at 1348–49 (emphasis added).

As Dr. Hughes establishes, the express words of claim element (f)(ii) provide the necessary structure and framework of an IF-THEN conditional program for the controller’s automatic uploading operation. Hughes Decl. at ¶¶102-16, 152. Each program condition is tested as “TRUE” or “FALSE” based on data inputs requiring no specialized programming or algorithm. *Id.* at ¶¶117-39. In addition, the claim language in element (f)(i) describes a simple input to the controller that turns the conditional “program” on. *Id.* at ¶¶140-151.

Because element (f)(ii) provides the overall structure for the claim’s key operations, CEV focuses on it first. Element (f)(ii) recites *directly in its claim language* the structure and framework of the program that completes the automatic upload. Hughes Decl. at ¶¶102-16, 152. Specifically, claims 1 and 5 of the ’472 Patent recite:

“a controller … configured to … ***automatically*** connect to a picture hosting service that is internet-based and enable an upload to the picture hosting service, over the internet and via the cellular interface, of a group of image sensor-captured pictures stored in the local memory, ***during any period detected by the controller in which all .. the following conditions are met*** [listing three or four conditions].”⁵

⁵ For brevity, CEV focuses on the ’472 Patent in this Brief. Dr. Hughes performs a similar analysis of the ’761 Patent claim language in his declaration at paragraphs 109-112.

Dr. Hughes thoroughly analyzes each part of the claim element, demonstrating that the highlighted language indicates to a POSITA an IF-THEN *conditional* programming structure for the controller. Hughes Decl. at ¶¶102-16, 152. The actual claim language – “*detected by the controller* in which all three of the following conditions are met” – shows that the controller program must test (i.e., detect) the conditions as TRUE or FALSE. *Id.* at 105. The claim language “automatically” and “during any period” requires that the controller is programmed to perform specific operations (“connect...and enable an upload”) if all of the conditions are returned as TRUE. *Id.* at 106. Thus, the claims say in prose that IF all conditions are TRUE, THEN “connect...and enable an upload.” *Id.* at 106, 108.

Thus, the express language in the claim provides a POSITA with a set of instructions or rules comprising a control program. *Id.* at 106, 152. The program’s output is to perform the recited operation in the claims: “connect...and enable an upload” using the controller and cellular interface hardware. *Id.* at 109-13. “To one of skill in the art, the ‘structure’ of computer software is understood through, for example, an outline of an algorithm, a flowchart, or a specific set of instructions or rules.” *Apple Inc. v. Motorola, Inc.*, 757 F.3d 1286, 1298 (Fed. Cir. 2014). Indeed, the ’472 Patent claims even use the term “conditions” as a guidepost, and the experts agree that *conditional* programming using IF-THEN statements was a well-known method of programming to a POSITA. Hughes Decl. at ¶104.

To confirm this assertion, Dr. Hughes prepared and attached as Exhibit 2 to his declaration a flowchart created *solely* from the *actual words of the claim*. Hughes Decl. at ¶152. As shown in the flowchart, the “conditions” in the claim are simple inputs and “TRUE-FALSE” tests. When all are “TRUE,” the upload operation happens. *Id.* Exhibit 2 shows that the language of the claim itself provides the required program structure for the controller.

Moreover, claim element f(ii) describes the exact operations the controller performs if all conditions are met: “connect to a picture hosting service that is internet-based and enable an upload to the picture hosting service, over the internet and via the cellular interface, of a group of image sensor-captured pictures stored in the local memory.” A POSITA understands that the controller would not need “specialized programming” for that output. *Id.* at 109-13. The claim recites a known cellular interface structure for transmitting the pictures over existing internet protocols. *Id.*

Indeed, the ‘472 patent (12:38-54) describes that the controller of the claims is programmed with existing technology for connecting and uploading, stating it is “equipped with a microbrowser that runs on the inventive camera system's camera controller which is preferably a microprocessor” and referring to known picture hosting sites. Hughes Decl. at ¶¶114–16; *Zeroclick, LLC v. Apple Inc.*, 891 F.3d 1003, 1008 (Fed. Cir. 2018) (finding that "user interface code" in the claim was “used not as generic terms or black box recitations of structure or abstractions, but rather as specific references to conventional graphical user interface programs or code, existing in prior art at the time of the inventions.”); *VDPP LLC v. Vizio, Inc.*, 2022 U.S. App. LEXIS 7857 * at *7 (Fed Cir. 2022, non-precedential) (finding terms were not 112 ¶6 in part because the specification described that “processors” and “storage” are “well-known.”).

T-Mobile also argues that a microbrowser “is not an algorithm allowing for automatic connection or confining uploads to specific periods” and does not “allow automatic connections and upload when certain conditions are met.” T-Mobile Brief, p. 14. However, as shown above, CEV is not relying on the microbrowser and existing internet protocols for *those* operations – the conditional “IF-THEN” structure recited in the claims provides that requisite structure.

As for the conditions in (f)(ii), both T-Mobile and its expert Dr. Wolfe fail to undertake any real analysis of the recited conditions in the claims or show that those inputs lack structure or

require special programming. As shown below and in the declaration of Dr. Hughes (¶¶117-39), the conditions do not require “special programming.”⁶ Instead, for each condition, the controller tests as “TRUE” or “FALSE” basic data inputs received via hardware. *Id.*

The first condition is “(1) the upload is allowed because the system is within one of the periods without potentially increased cellular network access fees, as determined using data from the cellular interface.” The claim element recites simply using data from the pre-existing cellular interface to determine whether the current period is one with potentially increased cellular network access fees. At the time of the invention, cellular devices already received that information, such as information pertaining to roaming, as a matter of course. Hughes Decl. at ¶¶117-25. Thus, no specialized programming is needed for a cellular device controller to receive that information and test the condition: for example, if the data received via the well-known cellular interface indicates the device is not roaming, condition (1) would be met (TRUE). If that data indicates the device is roaming, condition (1) would not be met (FALSE). *Id.*

The second condition is “(2) the system is connected to the internet via the cellular interface.” Here too, the controller simply receives basic data from the internet via the pre-existing cellular interface to test if the condition is met and return the result. *Id.* at ¶¶126-30. No specialized programming is necessary. *Id.*

The third condition is “(3) at least one image sensor-captured picture stored in the local memory has been designated through the touch sensitive display as part of the group of pictures to be uploaded to the picture hosting service.” Here, the condition describes a basic input to the touch sensitive display to designate a picture. *Id.* at ¶¶131-39. The claim describes that the controller answers condition (3) as TRUE or FALSE based on that simple received input from the touch

⁶ CEV addresses the conditions in ‘472 patent claim 1 as an example herein.

sensitive display. *Id.*

Accordingly, the three separate inputs to the IF-THEN program individually pre-existed and were known. *Id.* at ¶¶117-39. A POSITA would find them easy to obtain and simply test as “TRUE” or “FALSE,” without the need for a “specialized” program. *Id.* The claims also expressly describe the cellular interface and touchscreen input hardware. *Id.*

Moreover, for each condition in the claims, the specification describes existing prior art programming and algorithms used by the controller, touchscreen, and cellular interface hardware in the claims. *Id.*; *Zeroclick.*, 891 F.3d at 1008 (finding that "user interface code" in the claim was "used not as generic terms or black box recitations of structure or abstractions, but rather as specific references to conventional graphical user interface programs or code, existing in prior art at the time of the inventions.").

For example, to determine if “(1) the upload is allowed because the system is within one of the periods without potentially increased cellular network access fees, as determined using data from the cellular interface,” the specification describes that the claimed controller is integrated into prior art cellular devices that already had the capability to determine roaming status. Hughes Decl. at ¶¶117-25. To determine if the “(2) the system is connected to the internet via the cellular interface,” the specification describes that the claimed controller is programmed with already existing internet technology. *Id.* at ¶¶126-30. And to determine if “(3) at least one image sensor-captured picture stored in the local memory has been designated through the touch sensitive display,” the specification describes that the touch sensitive display uses known technologies for displaying and receiving user selections. *Id.* at ¶¶131-39. At his deposition, Dr. Wolfe agreed these technologies were available and known to a POSITA. *Id.* at ¶¶125, 135, 36.

As to element (f)(i) in each claim, T-Mobile argues that “confining automatic uploads of

photos to particular periods when there are not potential cellular network access fees or potentially increased cellular network access fees” requires specialized programming. T-Mobile Brief, p. 3. T-Mobile is wrong. Dr. Hughes establishes that no specialized programming is required because element (f)(i) is a simple option or input on the user interface that manually turns on the detailed IF-THEN program set forth in element (f)(ii). Hughes Decl. at ¶¶140-51.

More specifically, the claim language in (f)(i) “instructs the camera system to confine automatic picture upload to periods without potentially increased cellular network access fees” says, on its face, that selecting the option instructs the system to confine (e.g. restrict) uploading to certain periods. *Id.* at ¶143. To tie the two elements together, element (f)(ii) then recites the conditions under which uploads are “allowed” (using that term) if that option to “confine” in (f)(i) has been selected. *Id.*

In other words, if the option or input on the touch-sensitive display in (f)(i) is selected, element (f)(ii) describes the IF-THEN program structure to determine if the controller connects and uploads, including that the system must be within an “allowed” period for upload. *Id.* at 143, 148, 149. As an example, a roaming period is not a period in which upload is allowed. *Id.*

In sum, element (f)(ii) provides the “secret sauce” for automatically uploading by proving in its plain language an IF-THEN structure that tests conditions. Each individual condition that is tested by the controller in the program existed and used inputs that are obtained through known techniques. And element (f)(i) is simply an input to turn the IF-THEN structured program on.⁷

Furthermore, because the claims explicitly describe the structural details of an IF-THEN

⁷ CEV agrees that element (f) distinguished the art during prosecution. However, contrary to T-Mobile’s assertions, CEV always emphasized the structural elements, including the controller, touch sensitive display, cellular interface, memory, and conditional program structure, together with the operations, to distinguish the prior art. Hughes Decl. at ¶¶208-14. See also, *Dyfan v. Target Corp.*, 28 F.4th 1360, 1368 (Fed. Cir. 2022) (explaining that “[u]nlike in the mechanical arts, the specific structure of software code and applications is partly defined by its function.”).

program and the necessary hardware used in each operation of that program (see, Hughes Decl. at ¶¶153-56), the claims themselves provide structure “by describing the claim limitation’s operation, such as its input, output, [and] connections.” *Apple Inc. v. Motorola, Inc.*, 757 F.3d 1286, 1299 (Fed. Cir. 2014); *Cyboenergy*, 2023 U.S. Dist. LEXIS 227791 at *12 (finding that the term “DC Power combiner” was structural because the claim described its operation, input connections to boost converters, and output connection to a power supply).

2. The specification discloses the necessary algorithms for element (f).

Only in situations where both (1) a claim term is determined to be means-plus-function, despite not reciting the word “means,” and (2) the function requires implementation in a special purpose computer, the specification must disclose “as a mathematical formula, in prose, or as a flow chart, or in any other manner that provides sufficient structure” an algorithm for performing the claimed function. *Williamson*, 792 F.3d at 1352.

As explained in part III.1 above, T-Mobile’s argument fails at step 1, because CEV’s claims are not means-plus-function. As shown below, at step 2, the claims are not indefinite, because the specification discloses in prose, and with references to existing algorithms and products, the algorithms required or the operations recited in the claim.

Regarding the “automatically connect” element (f)(ii), T-Mobile disregards that the specification describes, in prose, a conditional program for automatically connecting and uploading. The specification describes that (1) the system can be programmed with a “set of predetermined conditions” or “rules,” and (2) the system is “**instructed** to automatically initiate a connection to the internet” and “offload” pictures whenever those predetermined conditions or rules are met. For example, the ’472 patent states:

- 11:67-12:4: “Another aspect of the present invention provides for simpler photo **offloading from the modern digital camera** when **a set of predetermined conditions**, such as day,

time, number of pictures to offload, etc., *are met.*"

- 12:63-67: "In an enhancement to the above-disclosed embodiments of this aspect of the invention, the inventive camera system is operable for being *instructed to automatically initiate a connection to the internet, LAN, printer, etc. whenever the predetermined conditions are met and it is in range of the network connection...*"
- 16:58-63: "As an example, *automatically connecting to the internet when a set of predetermined rules or conditions* (such as time, date, status of equipment, etc) is met would be useful for the download/upload of information from/to the internet, like music, video, etc. for processing, storage, transmission to another party, etc.."

As with the claims, a skilled artisan reading the above disclosure would clearly understand that specification provides IF-THEN conditional algorithm for automatic uploading. Hughes Decl. at ¶¶164-66. The words "predetermined conditions" or "rules," together with the word "automatically," signal that the controller is testing a set of conditions and performing operations if those conditions are met. *Id.* The word "automatically" specifies that the controller tests for the conditions, not a user. *Id.* And the words "predetermined rules or conditions" specify that the controller is pre-programmed with a set of conditions that are to be tested. *Id.*

Stated differently, the specification says in prose that IF all predetermined conditions are TRUE, THEN connect to the internet and upload. *Id.* The specification thus describes in prose the IF-THEN algorithm that is used by the claims for automatic uploading, and the legal requirements are met. *See Williamson*, 792 F.3d 1339 at 1352.

For the remainder of element (f), including each condition under (f)(ii) and the user input in (f)(i), no specialized algorithm is necessary because each of those elements recite basic inputs received via known hardware. Hughes Decl. at ¶¶167-207. It is well established that if an algorithm is needed, "the amount of detail that must be included in the specification depends on the subject matter that is described and its role in the invention as a whole, in view of the existing knowledge in the field of the invention." *Typhoon Touch Techs., Inc. v. Dell, Inc.*, 659 F.3d 1376, 1385 (Fed. Cir. 2011). Dr. Wolfe (¶119) admits that "[a] general purpose computer or microprocessor

can...perform...functions (such as receiving data, storing data, and processing data)," and that is enough for the inputs. Hughes Decl. at ¶¶167-207.

Also, the disclosure repeatedly points to existing algorithms and well known products that were already able to connect to a website and upload pictures, to receive inputs from a touchscreen or cellular interface, and to process those inputs as needed. *Id.*; *TecSec, Inc. v. IBM*, 731 F.3d 1336, 1349 (Fed. Cir. 2013) (finding that disclosure of existing "software products and how to use those products to implement the claimed functions" is sufficient disclosure of an algorithm for computer-implemented means-plus-function claims).

Dr. Wolfe (¶114) also incorrectly asserts that the claims require the controller to "make a determination whether there would be increased costs for upload," which would require "receiving ... subscriber's plan information" and "an algorithm that is not disclosed." However, no claim requires the controller to "make a determination whether there would be increased costs for upload" or to determine if fees will actually be incurred by a particular user. Hughes Decl. at ¶¶217-19. The claims refer to pre-existing and known periods of "*potential* cellular network access fees" or "*potentially increased* cellular network access fees" (e.g., data roaming). *Id.* The system as claimed is not required to determine if the individual user is charged. *Id.*

Instead, already-existing cellular devices were known to receive basic data from a cell tower that indicated if the device is within a "period of potentially increased cellular network access fees." *Id.* Thus, a specialized algorithm is not needed for the controller to receive and test that status using an existing cellular interface. *Id.* at ¶¶174-81. The specification describes integrating the system with existing cellular phone technology that already contains any necessary algorithm to determine its roaming state. *Id.*

For similar reasons, T-Mobile's arguments relating to the touch sensitive display inputs

fail. As explained in subpart 1 above, displaying an option on a touch screen, and receiving data corresponding to a selection of that option does not require any special programming algorithm for a controller that is coupled to a touch sensitive display. *Id.* at ¶¶188-202; *In re Katz Interactive Call Processing Patent Litig.*, 639 F.3d 1303, 1316 (Fed. Cir. 2011) (finding that “the functions of ‘processing,’ ‘receiving,’ and ‘storing’ are coextensive with the structure disclosed, i.e., a general purpose processor,” and “it was not necessary to disclose more structure than the general purpose processor that performs those functions.”). Moreover, the specification describes repeatedly known touch technology for menu selection. Hughes Decl. at ¶¶188-202. Disclosure of existing technology for accomplishing the operations, along with how to use that technology, meets any alleged “algorithm” requirement for the (f)(i) elements. *See, TecSec*, 731 F.3d 1336 at 1349.

T-Mobile thus fails to identify any “special purpose” operation in the claims that lacks a corresponding algorithm in the disclosure. The “controller” elements are not indefinite.

IV. “The device” is the “camera system”

T-Mobile admits that “[t]he term ‘the device’ could refer to the ‘camera system’ in the preamble, as CEV previously argued and the Court accepted.” T-Mobile nevertheless asks the Court to reverse that decision based solely on lawyer argument that “a POSITA would understand that the claim can also be read as having ‘the device’ refer to the ‘controller’ configured to perform the listed functions.”

As a first point, “Indefiniteness must be proven by clear and convincing evidence.” *Sonix Tech. Co. v. Publ’ns Int’l, Ltd.*, 844 F.3d 1370, 1377 (Fed. Cir. 2017). T-Mobile provides no expert opinion regarding “the device,” and attorneys are unqualified to testify regarding what “a POSITA would understand.” “Attorney argument is not evidence.” *Elcommerce.com, Inc. v. SAP AG*, 745 F.3d 490, 506 (Fed. Cir. 2014). T-Mobile was clearly aware of this, and elected to provide no

evidence that warrants reversal of this Court’s prior holding.

Like TCL, T-Mobile’s attorneys argue it is *possible* for the “controller” to “confine automatic picture upload to periods without potential cellular network access fees.” *See* TCL Reply Brief (Dkt. # 46), p. 4 (arguing “‘the device’*could refer* at least equally to the controller, the camera, or the camera system.”) However, the definiteness question asks if “a patent’s claims, *viewed in light of the specification and prosecution history*, inform those skilled in the art about the scope of the invention with reasonable certainty.” *Nautilus Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 910 (2014). As this Court previously confirmed, “the device” in this claim, with *this* specification and *this* prosecution history, as viewed by a POSITA, *must* be the “camera system.” Hughes Decl. at ¶¶35-53.

T-Mobile’s attorneys argue that the file history “is at best ambiguous.” T-Mobile Brief, p. 18. That argument is disingenuous, because T-Mobile fails to identify *anything at all* in the prosecution history or specification that would lead to a conclusion that “the device” is the controller, rather than the camera system. Indeed Dr. Wolfe admitted he reviewed the entire prior Hughes declaration analyzing the intrinsic evidence, yet he does identify any disagreement with Dr. Hughes’s statements or conclusions regarding “the device.” Wolfe Dep., pp. 45-47.

T-Mobile’s attorneys argue (T-Mobile Brief, p. 17):

“If ‘the device’ refers to ‘the camera system,’ rather than the controller, then the claims would allow some other, undisclosed component to perform the confining function. Because the controller is the only recited component for performing operations, a POSITA would understand that the ‘device’ could refer to the ‘controller.’”

T-Mobile also argues that claim 11 of the ’761 patent identifies “the controller as having a ‘control program having instructions.’” T-Mobile Brief, p. 18. Both arguments are wrong. The claims recite “A camera system comprising...a controller,” so even if the controller is the “component for performing operations” or stores “instructions,” the camera system can use it.

The weight of the evidence in the intrinsic record confirms “the device” in this claim refers to the “camera system.”

V. “Cellular network access fees”/ “increased cellular network access fees”

CEV does not contend that “cellular network access fees” and “increased cellular network access fees” have the same meaning. Rather, CEV contends that the Court’s prior ruling is correct that those phrases are to be construed in accordance with their plain and ordinary meaning, and that includes the plain and ordinary meaning for the word “increased.”

T-Mobile again presents only lawyer argument in support of its assertion that “increased” requires a special meaning – “a fee beyond the cellular network access fee.” Again, “[a]ttorney argument is not evidence” in claim construction. *Elcommerce.com*, 745 F.3d 490 at 506. T-Mobile’s construction is unnecessary: each term has its own plain and ordinary meaning in the context of the claim as a whole. *Zeroclick.*, 891 F.3d at 1008 (finding that the “context” of the terms at issue “strongly suggests the plain and ordinary meaning.”).

Dr. Hughes’ unrebutted testimony (the same testimony submitted in CEV/TCL) establishes that “cellular network access fees” refer to a category of upload fees for the upload, and the remaining adjectives (including the word “increased”) provide additional meaning. Hughes Decl. at ¶¶54-80.

VI. Conclusion

CEV submits that the Court’s prior claim construction remains correct. No term is indefinite, “the device” is “the camera system,” and the remaining terms should be given their plain and ordinary meaning. The “controller” terms are not written in means-plus-function format, and the claims themselves describe sufficient structure for the claimed operations.

Respectfully submitted on March 20, 2025, by:

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CERTIFICATE OF SERVICE

A true and correct copy of the foregoing instrument was served or delivered electronically via U.S. District Court [LIVE]- Document Filing System, to all counsel of record, on this the 20th day of March 2025.

/s/ Justin Lesko
Justin Lesko